

Fam. Geometridæ.

Milionia regina, sp. n.

Male.—Primaries very similar to the primaries of *M. Meeki*, but with the red band from the base very much narrower: secondaries deep black, the outer margin from the apex to the anal angle edged with a narrow band of chrome-yellow, upon which are six round black spots. Head and front of thorax blue-black; thorax and anal tuft chrome-yellow; abdomen bright blue.

Expanse $2\frac{3}{4}$ inches.

Hab. Woodlark Island (*Mus. Druce*).

Fam. Thyrididæ.

Rhodoneura nox, sp. n.

Male.—Primaries and secondaries black; both wings with a central faint greyish line across the middle. Underside of both wings reddish brown, streaked with black. The head, antennæ, thorax, and abdomen black; the underside of the abdomen pale fawn-colour; the legs dark brown.

Expanse 1 inch.

Hab. Tenasserim Valley, Burmah (*Doherty, Mus. Druce*).

XXV.—On the Hares of Western Europe and North Africa.
By W. E. DE WINTON.

FOR some time it has been evident that among the hares in the collection of the British Museum from different points in Southern Europe and the northern coast of Africa several species were represented, but until quite lately specimens were wanting from Sardinia, the type locality of *Lepus mediterraneus*, Wagner, and from Tangier, the type locality of *L. Schlumbergeri*, St. Loup, so that it was impossible to classify them satisfactorily; these two desiderata being now supplied, the authorities have kindly allowed me to work out this group.

Very little attention has been paid to the hares of Europe since 1857, when Blasius wrote his 'Fauna wirb. Deutschlands, Säug.,' a book which still stands far ahead of any other work on European mammals; this author seems to have had the necessary material to have thrown more light

upon the various forms of South European hares, but it does not seem quite clear that he had actually compared specimens from Spain with typical specimens of *L. mediterraneus*, Wagn., which he had seen in Turin (*t. c.* p. 415).

It is now generally agreed that Linnæus's *Lepus timidus* refers to the blue or variable hare, so that *L. europæus*, Pallas, must stand as the name of the brown hare; thus the typical form of that species is the brown hare of Russia = *L. timidus* (form *c*) of Blasius (*t. c.* p. 417). The Western European form described by Blasius (form *b*) as differing in colour is also smaller, the length of the hind foot being about an inch shorter than that of the Russian hare; although Blasius recognized the difference, he does not attach any distinguishing name to the form, but a name is placed in the synonymy attributed to Schimper on the authority of Gervais (*Zool. et Paléont. Fr.* p. 29, 1851), to which no description was ever published. In describing the species from the Mediterranean region these more northern well-known forms had to be referred to, and the Central or Western European form being found to differ so much in size and colour from the typical *L. europæus*, it is considered necessary to describe it and give it a distinguishing sub-specific name.

On bringing together specimens from the different countries bordering the northern and southern shores of the western portion of the Mediterranean Sea, it will be found that they form a very miscellaneous group. In choosing names for the different forms described I endeavoured to employ several that have found their way into the synonymy given by most authors of *L. europæus*, so that, in fact, hares should be found to fit the names, and not fresh names invented: but this was not found possible, the majority evidently referring to the same species; therefore to save further confusion fresh names are used.

The name *Lepus mediterraneus* was given by Wagner (*Münc. Anz.* 1841, p. 439) to the small species occurring in the island of Sardinia; this name has usually been employed by modern authors when mentioning hares found in any of the adjacent countries. Gervais (*Zool. et Paléont. Fr.* p. 29, 1851) introduced two names on the authority of Schimper, who had got together a considerable number of hares in the Strassburg Museum, the conclusion being that these forms were the same as *L. meridionalis*, Gené, a name never published; but later (*Hist. Nat. Mamm. i.* p. 282, 1854) the same author considers that Gené's species might probably be identical with *L. mediterraneus*, Wagn. Schimper appears

never to have published the results of his investigations himself. Blasius (Faun. Deutschl., Säug. p. 412, 1857) mentions all these names as synonyms of *L. timidus*=*L. europæus*, and brings in another name attributed to Schimper (Regensb. Corresp. 1850, p. 111), proposed for the hare of Andalusia obtained by Dr. Rosenhauer, but to which no description was added. Fitzinger (Sitzb. d. k. Akad. Wissensch. 1867, p. 161) adds another name for the Pyrenean hare (? sp.) on the authority of Nérée Boubée, with no reference to any description, but simply as a synonym of *L. timidus*=*L. europæus*; the same author in the same place introduces a name for the hare of Andalusia on the authority of Natterer, also without reference to it ever having been previously published: Natterer certainly was the first author to distinguish this hare from those of Central Europe; but although he gives a short description ('Isis,' 1818, col. 816), he mentioned no name, and Fitzinger does not notice this reference; it must therefore be written off as a *nomen nudum*. One more name for this same hare, though never published, is still in existence in the Vienna Museum; one or more specimens from Andalusia are, or were, labelled "*Lepus gracilis*, Natt." For this last piece of information I am indebted to Mr. Oldfield Thomas, who noted the fact during a visit to that museum in 1877.

Waterhouse (Mamm. vol. ii. p. 43, 1848) complicated matters by taking a hare from Tunis as typical of *L. mediterraneus*, Wagn.; but no specimen from Sardinia was then in the British Museum for comparison, so the error may readily be excused.

In this paper a deviation is made from the rule as to taking measurements; in all cases the length of the ear is taken from the base at the back, and not from the notch unless particularly stated. Every effort has been made to give as full measurements of the skulls as possible; but as there is so much individual variation, and the character of the skulls in this group makes it so difficult to know where to fix the points of the compass, owing to the irregularity of the sutures and many apophyses, these measurements must be accepted for what they are worth. Greatest length of nasal bones is taken diagonally on the bone of one side, being far easier than between two parallels, as there are no points in strict longitudinal line. The "molar series" is measured by the outsides of the tooth-sockets, as it is considered more reliable in this group than the teeth, which slope and have no crowns.

Lepus europæus occidentalis, subsp. n.

Smaller than *L. europæus typicus*; colour much warmer and more rufous throughout.

The difference in the length of the hind foot is perhaps the most constant size character. The difference in colour is most constant in the head and ears and legs.

I take as the type of this subspecies a specimen from Herefordshire, killed on the 7th January, 1898, which I propose to present to the British Museum.

Measurements taken in the flesh:—

Head and body 570 millim.; tail 86; hind foot 135, to end of claws and hair 142; ear from notch 99, from base at back 120.

Weight when killed 8 lbs. 6 oz.

For comparison I give measurements of a Russian hare of quite ordinary proportions (no. 94. 8. 7. 30 in Brit. Mus.), from Lithuania:—

Head and body (dry skin) (c.) 600 millim.; tail (c.) 90; hind foot (c.) 156, to end of claws 168; ear from notch (c.) 110, from base at back (c.) 121 without end-hairs.

The comparative measurements of the skulls given below do not show any striking differences, excepting in the basal length and mandible; I am, however, unable to say if this greater length would be always found in the Russian hare, but the proportion seems constant in the specimens examined.

Skull:	<i>L. e. typicus. L. e. occidentalis.</i>	
	millim.	millim.
Greatest length	102	99·5
„ breadth	48	47
Breadth across maxillæ below lachry- mals	39·5	35·5
Nasals, length in middle line	36	38·5
„ greatest length	48·5	46·5
„ greatest breadth	26	23
„ across narrowest part	18·5	17
Intertemporal constriction	14·7	15
Basal length	85	79·7
Length of upper molar series	20·5	20
Depth from top of nasals to palate in front of premolars	26	26
Depth from top of nasals to front of palate	20·5	21
Mandible, length (bone only) from con- dylar process to upperside of incisors	79·5	72
Mandible, length from back of incisors to angle	76	67
Mandible, greatest height standing on table perpendicularly to condyle ..	46·5	41

Lepus Lilfordi, sp. n.

Lepus granatensis (Schimp.), Rosenhauer, Regensb. Corresp. 1850, p. 111 (nom. nud.).

Lepus meridionalis (Gené), Gervais, Zool. et Paléont. Fr. p. 29 (1851) (partim, n. n.).

Lepus hispanicus (Natt.), Fitzing. Sitzb. Ak. Wissensch. 1867, p. 161 (n. n.).

Lepus pyrenaicus (Boubée), Fitzing, t. c. (n. n.).

Lepus gracilis, Natt., MS., in Museo Viennense (n. n.).

Lepus timidus (partim), Blasius et auct.

Lepus europæus (partim), *Lepus mediterraneus* (partim), auct.

Upper parts of head and body, ears, and tail much as in *L. e. occidentalis*, though the colours are darker, while varying somewhat in tone, as in that species; the tail is long, black above, white on the sides and beneath. Fur very much waved or plaited on the back; interspersed among the ordinary fur are long, coarse, snow-white hairs, which are very much more conspicuous than in *L. e. occidentalis*, especially on the sides and rump; these long hairs in their basal half, or that part hidden by the thick fur, are black, the terminal half protruding beyond the fur snow-white; both fore and hind limbs bay-red in front, snow-white behind; the white almost encircling the fore leg immediately above the elbow, and at the wrist extending from the inner side round on to the front of the joint; the fore feet are red, with tips near the nails white; on the hind feet the white extends in the same way from the inner side of the heel, so that the front of the foot is white save for the presence of narrow lines between the toes. The whole of the underparts are snow-white excepting the neck-band, which is dark fawn.

The most striking character of this hare is the sharp distinction between the colours of the upper and under surfaces of the body and the strong contrast between the bright bay of the outer sides of the legs and the pure white of the inner sides, the fur being also sleeker and lying closer on the legs than in any other species.

In the seven specimens referred to there is no variation whatever in the character of the markings.

Type ♂, 2nd Dec. 1894, Seville (Brit. Mus. no. 95. 3. 3. 12). Presented by Lord Lilford.

Measurements (taken from dried skin):—

Head and body 470 millim.; tail 86; ear 118; hind foot (without claw) 116.

Skull: greatest length 89; greatest breadth 43; breadth across maxillæ below lachrymals 33; length of nasals in middle line 30, greatest length 38, greatest breadth 20, across narrowest part 15.5; intertemp. constr. 12.1; basal length 71.5; length of upper molar series (tooth-sockets) 16.9;

depth from top of nasals to palate immediately in front of premolars 22·5. in front of palate 20; mandible, length (bone only) from condylar proc. to upperside of incisors 65, back of incisors to angle 60·5; greatest height standing on table perpendicularly to condyle 38·3.

The number of names which have been proposed show clearly that this hare was never thought to be the same as the more northern form, and I can only suppose that the would-be describers were baulked by not having a typical *L. mediterraneus* for comparison. It seems perfectly incredible that this well-marked species, by far the most strikingly coloured member of the genus, should never have been described; but after a most thorough search in every book or pamphlet which was likely to throw light on the subject, I am unable to attach any of the above names to a description.

I have connected with this handsome species the name of the late Lord Lilford, in memory of the extreme interest he took in the mammals of Europe, especially those of the Spanish peninsula, and in recognition of the gracious help he was always ready to give in assisting this branch of zoology.

Lepus mediterraneus, Wagn.

Lepus mediterraneus, Wagner, Münch. Anz. 1841, p. 439 (nec Waterhouse, nec Loche).

A description of this hare is given here for the sake of comparison, especially in regard to the measurements of the skull.

Size very small, not much more than half that of *L. e. occidentalis*; the ears are rather short in proportion, the backs of which are thinly clad with hair; the fur of the back is not waved and plaited; the nape, fore and hind legs bright foxy red, the underparts strongly washed with the same colour, excepting the centre of the belly and the inguinal region, which are pure white; there are no sharp lines between the colours in any part excepting the tail, which is like its allies. The bases of the fur in all parts are slate-coloured; this is very marked in the neck and chest-band, and on the back the fur is buff-grey beneath the broad black ring, and not white as in *L. europæus* and allies.

Measurements (taken from dried skin, no. 92. 2. 27. 1, in the British Museum, from Sardinia):—

Head and body (c.) 400 millim.; tail 76; hind foot 97; ear 96.

Skull: greatest length 79·5; greatest breadth 39; breadth of maxillæ below lachrymal 27·5; length of nasals in middle line 27, greatest length 34, greatest breadth 17·5, across narrowest part 12; intertemp. constr. 12; basal length 63; length of upper

molar series (tooth-sockets) 15; depth from upperside of nasals to palate immediately in front of premolars 18·5, above front of palatal foramen 16; mandible, length (bone only) from back of condylar process to upperside of back of incisors 57·3, from angular process to same place 55; greatest height standing on table perpendicularly to condyle 31.

Lepus corsicanus, sp. n.

In general colouring and proportions very similar to *L. e. occidentalis*, but resembling *L. mediterraneus* in having deeper grey bases to the fur generally, and the fur of the back being rusty below the black ring, with grey bases. The eyering is very conspicuous, being shown up by a rufous patch on the cheeks, which extends from in front of the orbit to halfway between the eye and ear. This pattern is traceable in other species, but is not nearly so conspicuous. The nape of the neck is unlike any of its allies, being grizzled smoky grey.

Type ♂, January 1875, Bastia (Brit. Mus. no. 78. 7. 3. 4). Presented by Lord Lilford.

Measurements (taken from dry skin):—

Head and body 450 millim.; tail 73; hind foot 119; ear 107.

Skull: greatest length 90; greatest breadth 43·5; breadth of maxillæ below lachrymals 31·2; length of nasals, middle line 31·5, greatest length 39·5, greatest breadth 21·5, narrowest part 14; intertemp. constr. 15; basal length (c.) 73; length of upper molar series (tooth-sockets) 17·2; depth from top of nasals to palate in front of premolars 21·5, at front of palatal foramina 18·2; mandible, length (bone only) from back of condylar process to upperside of back of incisors 65, upperside of back of incisors to angle 59·5; greatest height standing on table perpendicularly to condyle 36·5.

The breadth of the skull will at once distinguish this form from its near ally *L. kabylicus*.

Lepus kabylicus, sp. n.

Lepus mediterraneus, Levaill. Loche's Expl. Alg., Mamm. sp. 84 (nec Wagn.).

Lepus ægyptius, Lataste, Act. Soc. Linn. Bordeaux, xxxix. p. 157 (nec Geoff.).

Size about that of *L. Lilfordi*, but in colour closely resembling *L. mediterraneus*; the ears, which are still more naked behind than in the latter species, are proportionately longer, as are also the hind feet, and, like that species, the base of the fur is slate-coloured, and on the back the fur is

not white below the deep black ring, but buff shading into grey. There is a conspicuous buff-white ring round the eyes extending towards the nose and ears. The chest (somewhat grizzled) and fore legs are rufous, and all the underparts except the centre of the belly and the inguinal region are much washed with the same colour.

Type (Brit. Mus. no. 51. 8. 25. 7), Algiers.

Measurements (taken from dry skin):—

Head and body 475 millim.; tail (taken from another specimen, that of the type injured) 80; hind foot (c.) 105; ear 113.

Skull: greatest length, base damaged (c.) 86; greatest breadth 41; breadth of maxillæ below lachrymals 28·5; length of nasals, middle line 27, greatest length 34·5, greatest breadth 20, narrowest part 12·5; intertemp. constr. 12·2; basal length —; length of upper molar series (tooth-sockets) 15; depth from top of nasals to palate immediately in front of premolars 20·2, at front of palatal foramina 17·2; mandible, length (bone only) from back of condylar process to upperside of back of incisors 62, upperside of back of incisors to angle —; greatest height standing on table perpendicularly to condyle 35·5.

This hare is no doubt closely allied to *L. mediterraneus*, but, besides the greater size of the animal, the skull is so peculiarly narrow, that I consider it worthy of full specific rank.

Lepus Schlumbergeri, St. Loup.

Lepus Schlumbergeri, St. Loup, Bull. Soc. Zool. France, 1894, t. xix. p. 168.

As this hare has been very imperfectly described, a more complete description is here given; it is the common hare in the neighbourhood of Tangier.

Size medium, rather smaller than *L. e. occidentalis*; darker and greyer in colour, somewhat resembling the East African hare *L. victoriae*, but the grizzling coarser and more mottled owing to the very broad black median band on the fur; nape very pale cinnamon; a well-defined buff-white ring round the eyes, a stripe of the same colour extending towards the nose and the ears; ears medium, about same length as head, black tip not well defined; neck and chest dull brown, grizzled. The extreme bases of the fur of all parts are pale grey, on the back the base of the fur is only very faintly tinged with grey; there is a broad extent of dirty white, showing a slight tinge of pale cinnamon, followed by a deep black band; above this the coarser glossy hairs have

a broad pale buff ring, the extreme tips black. Whiskers scarce, mostly white.

Measurements:—

Head and body 470 millim.; tail (c.) 75; hind foot 120; ear 103, from occiput 115.

Skull: greatest length 91; greatest breadth (squamosals) 42.5; breadth across front of zygomatica 41.5; length of nasals in the middle line 31, greatest length 40, greatest breadth 21, across narrowest part 14.5; intertemp. constr. 12, breadth across maxillæ below lacrymals 31.7; basal length 72.5; length of upper molar series 15; depth from nasals to palate immediately in front of molars 20, above front of palatal foramina 16.5; length of mandible (bone only) from back of condylar process to upperside of back of incisors 65.5; greatest height standing on table perpendicularly to condyle 37.5.

Supraorbital wings well developed, prominently rising above frontals; temporal constriction very narrow; nasals very broad, encroached upon considerably by the frontals, in a broad almost parallel-sided process.

The skull is very broad, with prominent supraorbital wings, and thus very unlike the Algerian hare *L. kabylicus* (*suprà*) in every particular.

Lepus tunetæ, sp. n.

Lepus mediterraneus, Waterhouse, Mamm. ii. p. 43, 1848 (nec Wagn.).

In texture of fur and in the length of the ears resembling *L. aegyptius*, but the plain grooves in the incisors without cement-filling show it to be widely separated from that species. Colour pale, rather sandy; nape of neck soft reddish fawn; fore and hind legs reddish fawn; belly white; tail black above, white below. Colours generally dull and not sharply defined. Ears very long, almost naked behind in their whole length.

This is the hare taken by Waterhouse for *L. mediterraneus*, and from the extreme smallness of the last molar that naturalist was led to suppose that the tooth was altogether wanting; but it need hardly be said that this is *not* the case. This small tooth is only about half the size of that tooth in true *L. mediterraneus*, and, pressing closely against $\frac{m.2}{2}$, it might be overlooked if the skull was not thoroughly clean, as certainly was the case with Waterhouse's specimen, the original being still in the British Museum.

Type (British Museum no. 47. 10. 21. 3), Tunis. Collected and presented by — Fraser.

Measurements (taken from the dried skin):—

Head and body (c.) 400 millim.; tail 75; hind foot 100; ear 136.

Skull: greatest length 82; greatest breadth 41; breadth of maxillæ below lachrymals 28; length of nasals, middle line 28, greatest length 35, greatest breadth 20·2, across narrowest part 13·5; intertemp. constr. 12; basal length 61; length of upper molar series (tooth-sockets) 14·5; depth from top of nasals to palate immediately in front of premolars 19·5, above front of palatal foramina 15·5; mandible, length (bone only) from back of condylar process to upperside of back of incisors 60, upperside of back of incisors to angle 56; greatest height standing on table perpendicularly to condyle 37.

There are two specimens of this hare in the British Museum, presented by the same collector as the type specimen, labelled "Island of Kerkenna, off Tunis." The specific name is the genitive of Tuneta, the earlier form of Tunis.

XXVI.—*On a Collection of Heterocera made in the Transvaal* *.
By Sir GEORGE F. HAMPSON, Bart., B.A.

Pyralidæ.

GALLERIANÆ.

Lamoria imbella, Wlk. xxx. 955.

Pretoria.

CRAMBINÆ.

Crambus (Propexus) tenuistriga, sp. n.

Head and thorax pale brownish; abdomen whitish. Fore wing brassy yellow, with a fine white stripe slightly defined by fuscous from base through the cell to termen below apex; traces of dark points beyond lower angle of cell and of a sub-terminal series; a more prominent terminal series. Hind wing whitish.

Hab. Pretoria (*Distant*), numerous specimens. *Exp.* 24 millim. Type in B. M.

The only *Crambus* with pectinated antennæ recorded from the Old World.

* [I am indebted to Sir George Hampson for thus working out the collection of Pyralidæ I made in the Transvaal during the years 1893-96. The species were almost all taken at Pretoria, and I have added the names of fifteen others taken during my first visit (1890-91) and one which I recently described in these pages.—W. L. DISTANT.]